

Help and advice



**Martin Cummins on dampness in subfloors**

# See a subfloor as wet, unless it's proven dry

IT'S coming up for mid-summer and it's hot. The cold, damp winter days are a distant memory. And of course with all this heat the screeds are all lovely and dry.

The idea that a floor might need a membrane is pretty much inconceivable to many contractors – the floor looks dry, it feels dry, doors are open giving good ventilation – everything you could need so is it worth even testing the floors? Yes, yes and once more yes!

The trouble we have is that the appearance of a screed surface tells us little about what is below and a dry surface does not tell us the screed or concrete is dry.

One of the facilities we at Laybond offer is to test the subfloor on behalf of the main or flooring contractor.

Typically we turn up on site to test the floor and pretty much each time we are met with suspicion and caution with the main contractor under the mistaken belief that we are there to con him by telling him his floors are wet and as a result the flooring contractor is going to charge him for using a membrane and consequently the cost of the project from the flooring side has gone up.

They simply don't believe us when we tell them the floor is wet.

I recently visited a site to be met by the main contractor who, like described above, assumed I was there only to tell him his subfloor was wet. Well firstly, it isn't my opinion, it is the opinion of the instrumentation – the Hygrometer – and that is what determines the moisture level.

Unless British Standards change it is the only way a flooring contractor can say he's done his job properly. The particular floor was 150mm power float concrete, which had been down for five months or 150 days.

The contractor, applying the 1mm per day, accepted drying time for a screed, assumed that 150 days should surely be sufficient time to dry 150mm? But this figure of 1mm per day is accepted only for screeds laid up to 50mm; for thicknesses greater than 50mm this 1mm per day drying is no longer accurate.

Looking at the construction as a

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whole it also became apparent that the roof had only been put on some two months previous and up to this point the floor had been clearly exposed to the elements and whatever that may have meant in terms of rain and moisture.

The floor was polished like a sheet of glass, black and in a dark room with little air flow or ventilation.

I immediately suspected 95% RH and of course testing confirmed this. Of course I then got into discussion about not using the DPM as the main contractor has not priced for it in the job and they were certainly not got to use one where the floor covering was to be carpet (it is breathable so the moisture will get through was the argument).

Dampness in screeds can be very problematic even to carpet areas; mould growth can occur, shrinkage of the carpets upon drying out again can be a problem and even some of the adhesives that may be used to bond the carpet will come under scrutiny and can fail to hold the carpets.

Why was the floor still wet? Well, it is not often understood that the accepted 1mm per day drying time is only for screeds up to 50mm.

Additionally screeds are relatively open in texture which allows the moisture to escape much quicker than a floated concrete.

Although sand, cements and aggregates are used in concrete the nature of power floating concrete creates all sort of issues with regard to drying out.

The compaction of the surface and the additional depth of material (typically 150mm plus) mean that the moisture cannot

get out of the system at the same rate as pre a 50mm sand/cement screed.

Moisture is not so easily released and certainly not at 1mm per day. In fact for this thickness, drying can be anything up to a year.

Of course weather, temperature, the use of dehumidifiers, the amount of ventilation and room air flow can all influence this, but the cost of dehumidifiers for example would need to be included in the original project cost.

For new build, floors should not be considered dry and should be considered wet until proven otherwise.

In more instances than not, the floor will be above the 75%RH moisture level and will need a surface DPM, even where carpets are to be laid.

The hygrometer test is really to find that rare occasion when the floor might actually be dry. This does beg the question why membranes are therefore not

built into the price in the first place?

There is no conspiracy – neither the manufacturer nor the flooring contractor is trying to sell a membrane for the sake of it, they specify one because the floor is wet and needs one.

In summary, we are telling you that in new build projects, in most cases, all cementitious subfloors the floor will need a membrane.

Hopefully the day will arrive when flooring contractors start from the position that the floor will need a membrane, even if the main contractor starts from the position that it doesn't.

These days with one-coat membranes down time can be as little as six hours, so its application is not an issue.

Of course we will continually advise main contractors, designers and architects of the significance of moisture and the need to protect floor coverings, adhesives and smoothing compounds and, looking into my crystal ball, they will learn to consider subfloors wet unless proven otherwise (an eternal optimist!!)

Price in a membrane – don't take risks – even with carpet.

When main contractors learn to accept this from the off, on those occasions when you don't need a membrane, everybody will be happy! **CFJ**

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## David Gatfield on 2-part adhesives

# Don't hang about!

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are quicker to use up keeping the adhesive fresher and more fluid.

■ Always push or roll out all air pockets immediately, whilst the adhesive is wet.

■ Never leave site until the flooring has laid flat and blister free in the adhesive for at least two hours.

■ Never leave a blistered floor overnight to see if it will settle down - it won't!

We Brits are supposedly prone to lack of preparation before

heading into the sun. The number of people I see with pink faces and sunburnt arms after a good weekend, suggests this is probably true.

As it gets (hopefully) warmer, remember it is not just about getting yourself ready for the sun, think of your tools too – or your summer could be sticky for all the wrong reasons. **CFJ**

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